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RESEARCH ARTICLE

AMOMUM PTEROCARPUM (ZINGIBERACEAE): A NEW RECORD IN THE FLORA OF MANIPUR.

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Abstract

*Amomum pterocarpum*Thwaites.a native of Sri Lanka has been reported for the first time from Manipur. It has a distribution in India and as well as Sri Lanka. Detailed description and illustration of the plant is provided. The plant was found growing with a small population as undershrub in moist evergreen forest of Imphal East district, Manipur.

Introduction:-

The Zingiberaceae is the largest of the eight families of the order with 53 genera and over 1200 species (Kress, 1990, Kress *et al*., 2002). The genus *Amomum* Roxb.is the second largest genus of the family Zingiberaceae recorded with 150 species (Tripathi *et al.*, 1999). *Amomum subulatum* was described in detail with an excellent illustration for the first time (Roxburgh, 1820a) in his 'Plants of the Coast of Coromandel' and in 'Flora Indica' (Roxburgh, 1820b). *A. subulatum* is indigenous to moist deciduous and semi-evergreen forests of sub-Himalayan tracts.

Manipur is situated in the north eastern part of India sharing international boundary with Myanmar. It falls in the Indo-Burma biodiversity hotspot and has its own unique bio-resources of flora and fauna. An extensive survey was conducted in Imphal East District of Manipur, North-east India in the month of April, 2015. The *Amomum* specimen was observed for the first time from Imphal East district. The area is located at $24^0$49′ N and $94^0$04′E at an altitude of 1020m above msl. A detailed study was undertaken with the various floras and herbaria and is subsequently identified as *Amomum pterocarpum* Thwaites. The collection forms a new distributional record in the Zingiberaceae flora of Manipur.

Key to species:-
Spike shortly peduncled, capsule globose, fruit irregular……4.*A. pterocarpum*

Taxonomic treatment:-
Amomum pterocarpum Thwaites. Enum. Pl. Zeyl. 317. 1861. Hook.f. Fl. Brit. India 6. 241. 1892; Lakshminarasimhan in Sharma *et al*. Fl. Maharashtra State Monocot 68. 1996.

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Description:-
Plant perennial, aromatic, rhizomatous.Pseudostem elongate 1- 2.5 m tall. Leaf sheath present, large, oblong-lanceolate, adaxiallypubescent.Inflorescence arising from base of leafy shoot. Leaves 45 – 50 x 12 – 17 cm. Spikes 7.5 cm, globose, shortly peduncled. Bracts imbricate, persistent, outer bract oblong, glabrous. Flowers white, showy. Calyx tube 2.6 cm long, 3 toothed. Corolla glabrous, shiny, white in colour. 2.5cm x 8mm. labellum clawed 4 x 3 cm, conspicuous, yellow at center, white margin, lateral staminodes reduced to short appendages, anther crest semi-lunar, 3 lobed. Filament well developed, 5 cm long. Fruit capsule, irregular, smooth.
Fl. & Fr. – April - October

Conservation status – Least concern
Uses – Fruit masticator, spice and condiments, applied in toothache.

Established report– Seeds used as a stomachic, gums problem and kidney stones

Photo: *Amomumpterocarpum*Thwaites. in natural habitat

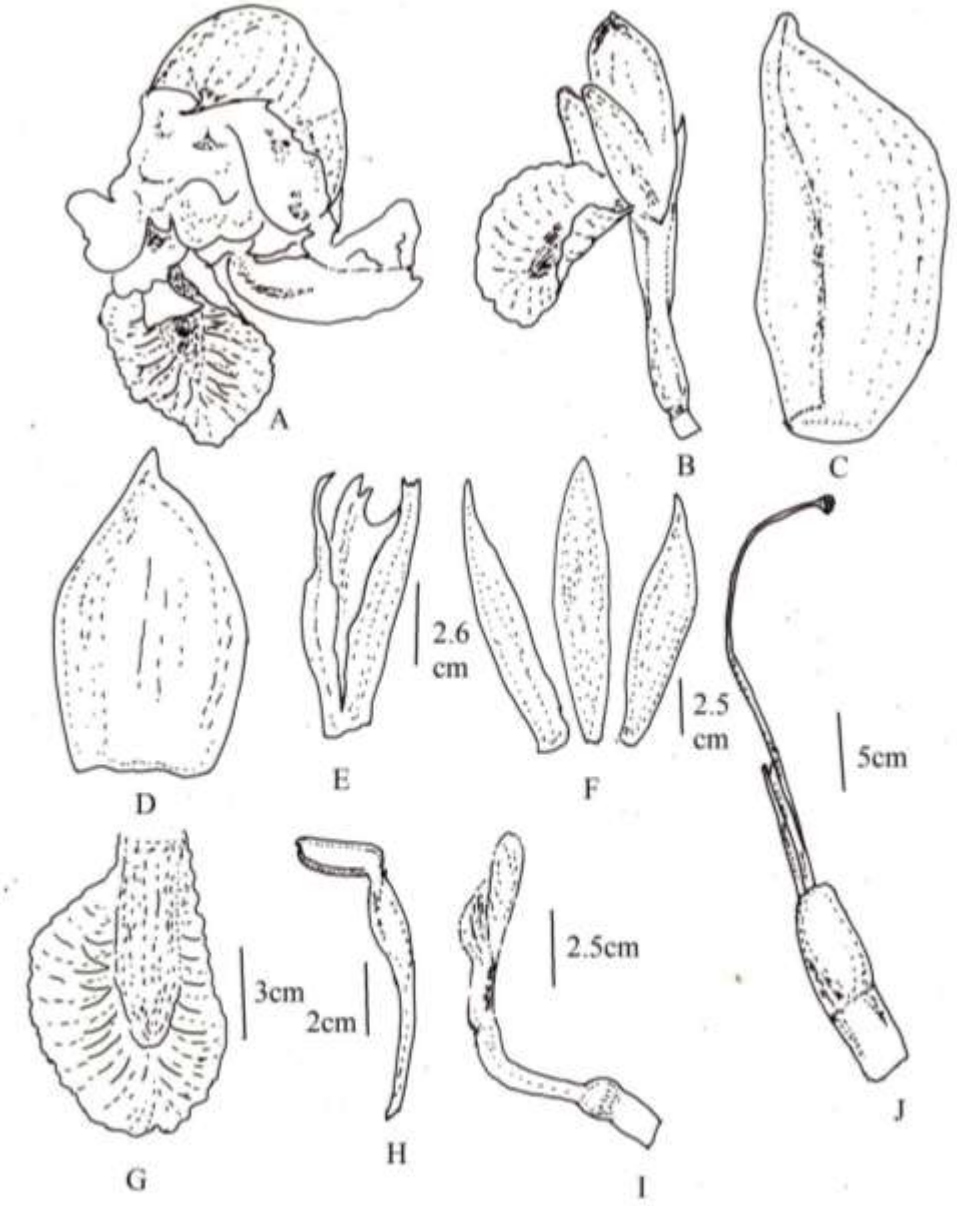

Fig. A. *Amomum pterocarpum* Thwaites. A. inflorescence B. single flower C. bract D. bracteole E. calyx F. corolla lobes G. labellum H. stamen I. labellum with ovary J. gynoecium with epigynous glands.

Discussion:-

Encroachment of the forest area is a serious problem facing towards the destruction of the forest. Another major threat for the destruction of forests includes burning down and felling of trees for charcoal following shifting and jhum cultivation which decreases the vegetation and flora of the area resulting in loss of habitat of the plants as well as microorganisms in soil.

All the plant species under this family are ethnobotanically important, mentioning few are *Hedychium coronarium, Alpinia galanga, Curcuma angustifolia*, *Zingiber officinale* which are consumed as food, as medicine, as well as it has a significant importance in performing our ritual duties in Manipur. The Composition of oils in rhizomes and leaves of *Amomum pterocarpum* Thwaites.were studied. Thus, the conservation practice of this plant species is the high time to start with the conservation program.

References:-

1. Deb, D.B. (1961). Monocot and Dicot plants of Manipur .Territory *Bull. Bot.*Surv. India. 3: 115-138.
2. Deb, D.B. (1983). The flora of Tripura state. Today and Tomorrow Publication, New Delhi. 2: 366-380.
3. Duthie, J.F. (1903) and (1922). *Flora of the Upper Gangatic Plant and the adjacent Siwalik and Himalayan trades.* Vol. I-II, Govt. of India. Central Publication Branch, Calcutta.
4. Hooker, J.D. (1872-1892).The Flora of British India, Vols.1-7.London.
5. Kress, W. J. Prince, L.M. and Williams, K.J. (2002). The phylogeny and a new classification of the gingers (Zingiberaceae): evidence from molecular data. *American J. Bot*. 89: 1682-1696.
6. Roxburgh, W. (1820a). Plants of the Coast of Coromandel. Vol 3. Mission Press, Serampore.
7. Roxburgh, W. (1820b). Flora Indica Vol. 1 W. Bulmer and Co., London.
8. Sabulal, B., George, V. and Dan, M. (2007). Composition of rhizomes and leaf oils of *Amomum pterocarpum* Thwaites. The Journal of Essential oil Research. 19(1). 23-25.
9. Tripathi, S. and Prakash, V. (1999). A new species of *Amomum* Roxb. from Meghalaya, India. Rheedea 9 (2): 177-180.